Description:

A mesh usually contains information about not only vertices and elements, but also groupings of those entities to represent material types and boundary conditions. There are also many other kinds of ?metadata?, or data about the mesh data, found in a typical mesh. In MOAB, sets and tags are used to represent groups of entities and application-assigned data on those entities, respectively. Sets and tags provide a versatile mechanism for storing and retrieving metadata to or from a mesh.

Code for the !SetsNTags example is shown here. This example demonstrates how to retrieve sets in a mesh tagged to represent material type and boundary condition groupings, along with the mesh entities in each of the groups. First, the tag handle corresponding to a pre-defined name is retrieved1. The sets containing that tag are then retrieved. The entities contained in each set are retrieved, using a Boolean flag to indicate that any contained sets should be traversed recursively to include non-set entities in the results.

Code
Test file

To run:

SetsNTags brick_cubit10.2.cub

Output:

```
MATERIAL_SET 100 has 1729 entities.
DIRICHLET_SET 300 has 722 entities.
NEUMANN_SET 200 has 361 entities.
```